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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Kent L. Leung

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EXAMINER

HO, THOMAS M

ART UNIT

PAPER NUMBER

2134

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/751,944	Applicant(s) LEUNG ET AL.	
	Examiner Thomas M. Ho	Art Unit 2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11, 12 and 14-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9, 11, 12, 14-25 and 34-36 is/are allowed.
- 6) ☒ Claim(s) 26-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment of 12/23/05 has been received and entered.
2. Claims 1-9, 11-12, 14-25, 34-36 are allowable as previously indicated.

Response to Arguments

3. The Applicant has argued on page 15, 6th paragraph of the Arguments

The Examiner seeks to cure the deficiencies of the primary reference with Mobile IP, citing page 50, section 3.5.2 of Mobile IP. However, Applicant notes that this portion of Mobile IP discusses agent advertisement transmitted by the Foreign Agent, not a registration request packet transmitted by the Foreign Agent on behalf of a node. These are two entirely different types of messages sent for entirely different purposes. As such, the combination of the cited references would fail to achieve the desired result. Moreover, neither of the cited references, separately or in combination, discloses or suggests indicating whether a registration is an initial registration or re-registration on behalf of a node in a registration request packet. Accordingly, the combination of the cited references would fail to achieve the desired result.

The Examiner however contends that the term of art, “advertisement” is misleading. The Applicant seeks to argue two different types of messages used for entirely different purposes,

because section 3.5.2 refers to an “agent advertisement” and the claimed limitation refers to registrations of nodes.

It is true that a lay person reading the art would draw an inference than a message for the purpose of advertising as commonly understood would draw little parallel with registration.

However, in the art of Mobile IP, the two are related, and agent advertisements are indeed a part of the registration process.

Page 56 of “Mobile IP: Design Principles and Practices” (section 4.1) discloses a registration overview which discloses:

“Mobile IP has two variations of its registration procedures—one by means of a foreign agent that relays the registration to the mobile node’s home agent and one without any such intermediary. The following rules determine which of these two registration procedures to use in any particular circumstances.

- *If a mobile node is registering a foreign agent care-of-address, the mobile node is required to register via that foreign agent.*
-
- *Under any circumstances, if a mobile node receives an agent advertisement from a foreign agent with the R bit set, the mobile node should register via a foreign agent.* [emphasis added]

Applicant’s limitation recites:

Malkin et al. fails to explicitly disclose

- Receiving the registration request packet from a Foreign agent that is performing proxy registration on behalf of the node, the registration request packet including a registration

indicator indicating whether registration being performed by the Foreign agent on behalf of the node is a re-registration by the Foreign Agent or an initial registration by the Foreign Agent

The Examiner previously recited (page 50, Section 3.5.2), but did not disclose section 4.1 explicitly, because the registration process of mobile IP as presented is commonly understood to those skilled in the art of mobile IP. The Examiner however, did include section 4.1 in the notice of references cited. The Examiner will clarify his position in reference to relation between the agent advertisements and the registration process of mobile IP.

“Mobile IP: Design Principles and practices” (Page 50, Section 3.5.2) and (Section 4.1) discloses

Receiving the registration request packet from a Foreign agent that is performing proxy registration on behalf of the node, the registration request packet including a registration indicator indicating whether registration being performed by the Foreign agent on behalf of the node is a re-registration by the Foreign Agent or an initial registration by the Foreign Agent;

where the registration request packet comes from a foreign agent by first receiving an agent advertisement with the R bit set, which by section 4.1 would cause the mobile node to register via the foreign agent (a registration request packet including a registration indicator, the R bit, to perform registration by the Foreign agent on behalf of the mobile node) where registration is an initial registration if the sequence number is zero, and is a re-registration if the sequence number is not zero.

Applicant further argues on page 16:

...Moreover, the use of sequence numbers in the manner claimed is neither disclosed nor suggested by the cited art.

The Examiner asserts that a digital or online request to register as a patent attorney or agent or for the patent bar would read upon the sequenced "registration request packet." However, it is important to note that a USPTO patent agent/registration number is not used during the registration process to determine whether to register the patent attorney or agent, but is assigned after a decision to register the patent attorney or agent has already been made. As such the USPTO patent agent/registration number teaches away from the claimed invention.

The Examiner contends however, this is a distinction without merit. Regardless of when the registration takes place, the fact is, each registration is granted a specific sequence number. Regardless of when the number is assigned, the registration number is aptly called a "registration number" and is used to denote a numerical sequence of registration. Absent any further support for this position or elaboration as to why this teaches away from the claimed invention, the Applicant's arguments are unpersuasive.

For the reasons presented above, the Examiner has maintained the rejections of claims 26-33.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 26-33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains new subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Specifically, the amended limitation “and does not support mobility” which has been added to independent claims 26 and 28 recites a negative limitation that is not actively supported by the specification and is considered new matter.

MPEP 2163.06 describes the background and statutory basis for amendments constituting new matter

2163.06 Relationship of Written Description Requirement to New Matter
Lack of written description is an issue that generally arises with respect to the subject matter of a claim. If an applicant amends or attempts to amend the abstract, specification or drawings of an application, an issue of new matter will arise if the content of the amendment is not described in the application as filed. Stated another way, information contained in any one of the specification, claims or drawings of the application as filed may be added to any other part of the application without introducing new matter.
There are two statutory provisions that prohibit the introduction of new matter: 35 U.S.C. 132 - No amendment shall introduce new matter into the disclosure of the invention; and, similarly providing for a reissue application, 35 U.S.C. 251 - No new matter shall be introduced into the application for reissue.

I. TREATMENT OF NEW MATTER

If new subject matter is added to the disclosure, whether it be in the abstract, the specification, or the drawings, the examiner should object to the introduction of new matter under 35 U.S.C. 132 or 251 as appropriate, and require applicant to cancel the new matter. If new matter is added to the claims, the examiner should reject the claims under 35 U.S.C. 112, first paragraph - written description requirement. In re Rasmussen, 650 F.2d 1212, 211 USPQ 323 (CCPA 1981). The examiner should still consider the subject matter added to the claim in making rejections based on prior art since the new matter rejection may be overcome by applicant.

In an instance in which the claims have not been amended, per se, but the specification has been amended to add new matter, a rejection of the claims under 35 U.S.C. 112, first paragraph should be made whenever any of the claim limitations are affected by the added material.

When an amendment is filed in reply to an objection or rejection based on 35 U.S.C. 112, first paragraph, a study of the entire application is often necessary to determine whether or not "new matter" is involved. Applicant should therefore specifically point out the support for any amendments made to the disclosure.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 26-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malkin et al. and "Mobile IP: Design Principles and practices".

In reference to claim 26:

Malkin et al. discloses in a Home Agent supporting Mobile IP, a method of processing a registration request packet composed on behalf of a node that supports the Point-to-Point protocol, comprising:

- Determining from the registration indicator whether to accept registration of the node with the Home Agent, where one of the registration indicators is whether the registration request was replied to within a predetermined amount of time, and is accepted if it is. (Column 5, lines 20-27)
- Composing a registration reply packet indicating whether registration of the node with the Home Agent is accepted (Column 5, lines 28-35)
- Sending the registration reply packet to the Foreign Agent, where the sent packet is received by the Foreign Agent (Column 5, lines 28-35)

Malkin et al. fails to explicitly disclose

- Receiving the registration request packet from a Foreign agent that is performing proxy registration on behalf of the node, the registration request packet including a registration indicator indicating whether registration being performed by the Foreign agent on behalf of the node is a re-registration by the Foreign Agent or an initial registration by the Foreign Agent

“Mobile IP: Design Principles and practices” (Page 50, Section 3.5.2) and (Section 4.1) discloses

- Receiving the registration request packet from a Foreign agent that is performing proxy registration on behalf of the node, the registration request packet including a registration

indicator indicating whether registration being performed by the Foreign agent on behalf of the node is a re-registration by the Foreign Agent or an initial registration by the Foreign Agent, where the registration request packet comes from a foreign agent by first receiving an agent advertisement with the R bit set, which by section 4.1 would cause the mobile node to register via the foreign agent (a registration request packet including a registration indicator, the R bit, to perform registration by the Foreign agent on behalf of the mobile node) where registration is an initial registration if the sequence number is zero, and is a re-registration if the sequence number is not zero.

Malkin et al. also discloses that the intended use of the invention is to provide open communication between the home network and the remote node using the Mobile IP protocol. (Column 5, lines 40-46)

It would have been obvious to one of ordinary skill in the art at the time of invention to use aspects of the Mobile IP protocol in Malkin et al. because Malkin et al. discloses the usage of the Mobile IP protocol, though for brevity, fails to explicitly disclose that particular detail of the protocol.

In reference to claim 27:

“Mobile IP: Design Principles and practices” (Page 50, Section 3.5.2) & (Page 78, Section 4.8.1) discloses the method as recited in claim 26 further comprising:

indicating if the registration is initial or a re-registration, and is updated in the registration table with the rest of the information of the Mobility Agent Advertisement Extension. (page 45, Figure 3.3)

In reference to claim 28:

Malkin et al. discloses in a Home Agent supporting Mobile IP, a method of processing Registration request packet composed on behalf of a node that supports the Point-to-Point Protocol, comprising:

- Composing a registration reply packet indicating whether registration of the node with the Home Agent is accepted. (Column 5, lines 25-35)
- Sending the registration reply packet to the Foreign Agent. (Column 5, lines 25-35)

“Mobile IP: Design Principles and practices” (Page 50, Section 3.5.2) discloses

- Receiving the registration request packet from a Foreign Agent that is performing proxy registration on behalf of the node, the registration request packet including a sequence number indicating an order within the sequence of one or more registrations performed by one or more Foreign Agents on behalf of the node, where the packet includes the sequence number among other pieces of data. (Figure 3.3, Page 45) & “Mobile IP: Design Principles and practices” (Section 4.1)
- Determining from the sequence number whether to accept registration of the node with the Home Agent, where a registration is not accepted if no rebooting of the foreign agent

occurs, for example in a rollover of the foreign agent because the registration is still the same registration. (Page 50, Section 3.5.2)

Malkin et al. also discloses that the intended use of the invention is to provide open communication between the home network and the remote node using the Mobile IP protocol. (Column 5, lines 40-46)

It would have been obvious to one of ordinary skill in the art at the time of invention to use aspects of the Mobile IP protocol in Malkin et al. because Malkin et al. discloses the usage of the Mobile IP protocol, though for brevity, fails to explicitly disclose that particular detail of the protocol.

In reference to claim 29:

Malkin et al. (Column 5, lines 15-20) fails to explicitly discloses the method as recited in claim 1, further comprising:

“Mobile IP: Design Principles and practices” (Page 50, Section 3.5.2) reveals that one aspect of the Mobile IP protocol uses Sequence numbers to indicate a sequence number indicating the order of the transmissions of within a sequence of one or more transmissions that starts with the number zero, where the transmission type is an advertisement.

The Examiner furthermore takes official notice that giving a sequence number for a registration in order of registrations was well known at the time of invention. For Example, the patent office assigns registrations numbers to newly published patents in sequence as they are published. The Examiner even notes that the Applicant's representative, Elise R. Heilbrunn even has a registration number 42,649 which occurs in sequence.

It would have been obvious to one of ordinary skill in the art at the time of invention to use aspects of the Mobile IP protocol in Malkin et al. in order to sequence registration numbers, in order to quickly reference the registrations in a well organized fashion.

In reference to claim 30:

"Mobile IP: Design Principles and practices" (Page 50, Section 3.5.2) discloses the method as recited in claim 28, further comprising:

- Determining from the sequence number whether the registration request packet corresponds to an initial registration of the node with the Home Agent, where the registration is initial is the sequence number is zero.
- When the sequence number indicates that the registration request packet corresponds to the initial registration of the node with the Home Agent, indicating in the registration reply that registration of the node with the Home Agent is accepted, where if the registration corresponds to the initial registration of the node the mobile node is re-registered.

In reference to claim 31:

“Mobile IP: Design Principles and practices” (Page 50, Section 3.5.2) & (Page 78, Section 4.8.1) discloses the method as recited in claim 30, further comprising wherein when the sequence number indicates that the registration request packet corresponds to the initial registration of the node with the Home Agent, incrementing the sequence number to create an updated sequence number, creating an entry in a mobility binding table associating the updated sequence number with the node, and providing the updated sequence number in the registration reply, where sequence number is incremented by one each subsequent time.

In reference to claims 32 and 33:

Both claims 32 and 33 specifically recite claim limitations that disclose a comparison of either a second sequence number to be compared or a second care of address to be compared with one that has been previously registered with the registration table or mobility binding table(also effectively a registration table)

“Mobile IP: Design Principles and practices” fails to explicitly disclose the

- When the data values(sequence number or care of address) to be compared are not equal to the ones found in the registration table, the registration reply packet is denied.
- When the data values(sequence number or care of address) to be compared are equal to the ones found in the registration table, the registration reply packet is accepted.

“Mobile IP: Design Principles and practices” (Page 78, Section 4.8.1) discloses that with regards to the mobility binding list, that the home agent is required to create or modify an entry regarding a Mobile Node’s care of address and registration lifetime, such as that indicated in the format of the packet in (figure 3.3, page 45)

The Examiner takes official notice that it was obvious at the time of invention to deny an authentication or disallow full access, if one or more characteristics of a verification process were found to be unmatching.

Examples are Malkin et al. (Column 4, lines 15-20) and

“Mobile IP: Design Principles and practices” Page 79, Item 3 further indicates that during the validity checking process, if no foreign home extension is found, the home agent is required in the reply to reject the registration.

“Mobile IP: Design Principles and practices” Page 63, Item 133 also indicates that a registration by the foreign agent may be denied if there is a mismatch in the identification.

This method is also common to password and authentication processes.

It would have been obvious to one of ordinary skill in the art at the time of invention to deny the registration reply packet if any information characteristics of a registration between a Home agent and a mobile node, including a sequence number and care of address, were found to be

unmatching, in order to prevent mismatching registrations or registrations without the proper parameters from being allowed and consequently avoiding errors.

Conclusion

7. The following art not relied upon is made of record:

- US patent 6167513 is a mobile computing scheme using encryption and authentication
- US patent 6947401 is a method of hierarchical mobile management for wireless networks
- US patent 6230012 is a method of IP mobility support using mobile node proxy registration

8. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of the final action and the advisory action is not mailed under after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension pursuant to 37 CFR 1.136(A) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication from the examiner should be directed to Thomas M Ho whose telephone number is (571)272-3835. The examiner can normally be reached on M-F from 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques H. Louis-Jacques can be reached on (571) 272-6962.

The Examiner may also be reached through email through Thomas.Ho6@uspto.gov

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-2100.

General Information/Receptionist	Telephone: 571-272-2100	Fax: 703-872-9306
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TMH

April 1st, 2006

Jacques H. Louis-Jacques
JACQUES H. LOUIS-JACQUES
REGISTERED PATENT EXAMINER